

Patent Abstracts of Japan

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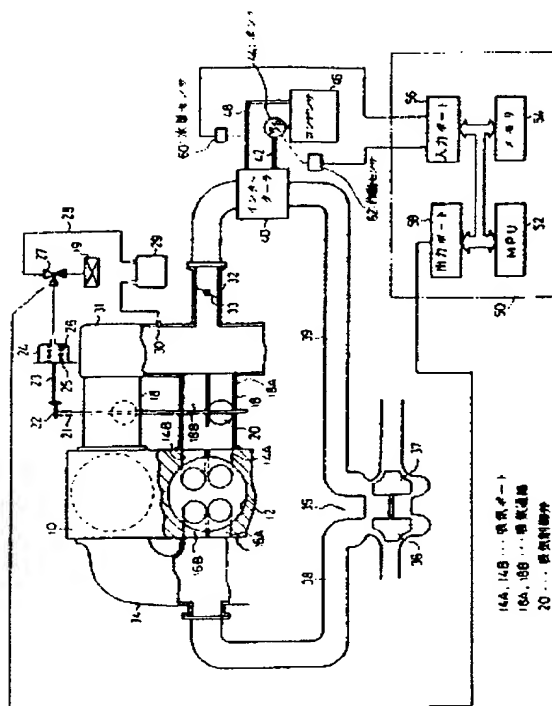
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APPLICANT : TOYOTA MOTOR CORP;

INVENTOR : TAKEDA YUJI;

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TITLE : TWO-INTAKE PASSAGE
INTERNAL-COMBUSTION ENGINE
EQUIPPING INTERCOOLER



ABSTRACT : PURPOSE: To prevent knocking when an intercooler is in an abnormal state, by providing two intake passages in each cylinder while a control valve, opening and closing in accordance with an operating condition, in one of the intake passages and fixing the control valve to its opening position when the intercooler is in abnormal cooling operation.

CONSTITUTION: Charging air pressurized in a supercharger 35 is cooled in an intercooler 40 and sucked to each cylinder from two intake ports 14A, 14B through a normally opened intake passage 18B and an intake passage 18A equipping an intake control valve 20 opened when an engine is high loaded. Cooling water from a condenser 46 is supplied to the intercooler 40 through a pump 44 and returned to the condenser via a pipe 48. A control device 50, switching a selector valve 27 by a signal of a water quantity sensor 60 when the quantity of said cooling water decreases to a small value while by a signal of an operation sensor 62 when the pump 44 multifunctions, prevents knocking by fixing the intake control valve 20 to the opening condition.

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